Boswell, Maitland C [Associate Professor of Organic Chemistry] July 1917

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University of Toronto
TORONTO, CANADA

FACULTY OF APPLIED SCIENCE AND ENGINEERING

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Whitby Ont
R. R. No. I
July 7th 1917

Sir Robert Falconer
President, University of Toronto,

Dear Mr Falconer,

I wish to thank you very heartily for your letter containing the notification of my promotion to the rank of Associate Professor.

In view of the special importance which is attached to research work within the University to-day and in view of the new departure in the establishment of a School of Engineering Research within the faculty of Applied Science, it may not be out of place for me to briefly state what I am doing in the field of investigation in Chemistry.

Apart from the research work which I direct each session with the students of the fourth year, and which is designed more with a view to secure

To the student a training in research methods and a knowledge of the current chemical literature and other primary sources than to obtain results for publication, I have been carrying out some investigations myself. One of these had to do with the manufacture of carbolic acid and Picric acid for a firm in New Jersey manufacturing explosives for the French government. The results were given in a joint lecture by the manager Dr Vanderlinde and myself at the last meeting of the Society of Chemical Industry. However the major part of my research work during the past three years has been upon the mechanism of plant growth. This has involved a study of the gas reactions occurring in germinating seeds and growing plants, the nature of enzyme action and the peculiar and potent action of matter in the colloidal state. This work I performed in the chemical laboratory at Toronto. The results which I have obtained have given me faith in the correctness of the main part of the working

hypothesis which I formed at the outset, and have encouraged me to pursue the work further. However they also pointed to the necessity of obtaining some first hand information in the field about soils and the growing plant. I accordingly purchased a farm about two years ago some twenty five miles east of Toronto where I am conducting some small plot and a number of pot experiments. It may at first sight seem that in this plant work I am forsaking my department of organic chemistry for those of agriculture and plant physiology. But a closer inspection shows that the basic problems both of physiology and agriculture are problems in the chemistry of organic compounds. Before Agriculture can rise from its present empirical condition and attain the dignity of a science these basic problems in the pure chemistry and pure physics of plant reactions must be solved. The "hit and miss" methods of the experimental ~~stations~~ stations with their strong appeal to the so-called "practical man", will never solve them. This is an enormously

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complex set of problems for here you have the meeting place of the sciences of chemistry, physics, physiology and bacteriology with the influence superimposed upon these sciences of pure mechanism, of the "life force" which biologists are no longer so prone to ignore. Whether I can solve any problems which shall help to make Agriculture a science I cannot say, but I am hopeful that along the way I may make some contributions to the intermediate problems having to do with the mechanism of plant growth – the nature of enzyme action and the chemistry of matter in the colloidal state.

Again thanking you for my promotion

I remain Sir,

Yours very truly

Maitland Boswell.